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ABSTRACT

This longitudinal study of beginning teachers in Kentucky yields a number of characteristics useful in identifying persons most likely to obtain and retain teaching positions in secondary education. The Western Kentucky University Teacher Preparation Evaluation Program (TPEP), begun in 1971, follows careers of elementary and secondary school teachers from the time of student teaching through the fifth year of teaching (or until they drop out of the profession or move out of state). Objectives of the program are to determine factors relating to whether or not an individual is likely to enter and continue in a teaching career and areas for further investigation to assist teacher educators in screening applicants for professional programs, as well as to aid preservice teachers in making appropriate career decisions. Data collection instruments and analysis procedures are described. Discussion is presented on the attrition of TPEP subjects, those who entered teaching and those who did not, and those who left prior to the third year of teaching and those who did not. Six generalizations are presented: (1) the TPEP model is useful in comparing graduates; (2) only between one-third and one-fifth of graduating seniors are likely to be teaching after five years; (3) the main reason for not immediately entering the teaching profession is a lack of teaching positions; (4) reasons for not remaining are varied, but for women, the most frequently cited is pregnancy; (5) few differences exist between elementary education majors obtaining positions and those who don't, but significant differences exist between those leaving and those remaining; and (6) with secondary education majors, significant differences are found between those obtaining or not obtaining a position, but few differences between those who leave and those who remain. (MJB)

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# The Western Kentucky University Evaluation Model: Implications for Career Decisions

A Presentation by

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## The Western Kentucky University Evaluation Model: Implications for Career Decisions

According to the findings from a recent report by Joyce[1] of a nation-wide survey of colleges and universities which prepare teachers, there are 1,400 institutions across the country staffed by more than 40,000 faculty members with nearly 200,000 senior students in teacher education. However, not all of these students become career teachers. Responses from faculty members from the sample of the nearly 200 institutions surveyed indicated that only about one-third of the students who enter professional study are expected to graduate, find a teaching job, and teach for more than a year or two.

At Western Kentucky University this expectation has become reality according to the data collected since 1972 in the Teacher Preparation Evaluation Program, (TPEP). In this evaluation program students are selected as they commence their student teaching and are followed through their fifth full year of teaching or until they drop out of teaching or move out of state. From random samples of elementary and secondary student teachers selected in the spring of 1972 and 1973, only 23 percent remained in a teaching position in Kentucky five years after their graduation from college.

Since this high rate of attrition from teaching is a possible indicator of some loss in terms of finances, resources, and time, it behooves the profession to recognize and attempt to solve this problem. A portion of the solution should involve identification and examination of the factors relating to attrition from the teaching profession in order that students who enter teacher preparation programs can be assisted in making appropriate career decisions.

The primary purpose of this study was to determine factors relating to whether or not an individual is likely to enter and continue in a teaching career. A secondary purpose was to determine fruitful areas for further investigation to assist teacher educators in screening applicants for professional programs and to help preservice teacher education students make appropriate career decisions. Specifically, this study attempted to answer the following questions:

1. What percent of seniors enrolled in student teaching obtain teaching positions the year immediately following graduation and what percent continue in teaching positions in Kentucky over a five-year period?

2. What are the most frequent reasons given by teacher education graduates for not entering the teaching profession or for leaving the teaching profession?

3. Are there differences between teacher education graduates who obtain teaching positions and those who do not with respect to variables measured during students' student teaching experiences?

4. Are there differences between teacher education graduates who leave the teaching profession after their first year of teaching and those who continue in the teaching profession with respect to variables measured during their student teaching experience and during their first year of teaching?

5. Which of the variables measured in TPEP are the best predictors of whether or not a graduate of the teacher education program will obtain a teaching position?

6. Which of the variables measured in TPEP are the best predictors of whether or not a teacher will continue in teaching through the third year?

## The Western Kentucky University Teacher Preparation Evaluation Program (TPEP)

Western Kentucky University began TPEP during the fall of 1971 in order to provide (1) an objective and quantifiable evaluation of its teacher education graduates, (2) data-based feedback to faculty and administrators for decisions about program development and modification, and (3) longitudinal data base for research in teacher education.

TPEP at Western was patterned after an evaluation model developed by Sandefur[2] and described in a monograph entitled "An Illustrated Model for the Evaluation of Teacher Education Graduates" published by AACTE in 1970. This model was based on the following three generalizations derived from a review of the research literature on teacher efforts.

1. Good teaching utilizes the maximal involvement of the student in direct experimental situations.

2. Good teaching encourages maximal "freedom" for the student.

3. Good teachers tend to exhibit identifiable personal traits broadly characterized by warmth, democratic attitude, affective awareness and a personal concern for students.

Consequently, instruments were selected for the TPEP to collect (1) career base line data, (2) direct classroom observation data, (3) pupil, peer, and supervisor evaluations, (4) standardized personality measures, and (5) self-report data. The specific instruments developed and/or selected were:

1. The Career Base Line Data Questionnaire - a 23-item instrument designed to collect demographic and professional data.

2. The Classroom Observation Record (COR) - a direct classroom observation system developed by Ryans[3] that measures four dimensions of student behavior and 18 dimensions of teacher behavior.

3. A 19 Category System of Interaction Analysis - a modification of the Observational System for the Analysis of Classroom Instruction by Hough[4], a system which obtains twenty-five separate measures of a teacher/student interaction.

4. The F-Scale - a 30-item instrument developed by Adorno[5] that measures authoritarian tendencies of the teacher.

5. The Rokeach Dogmatism Scale - a 40-item instrument developed by Rokeach[6] that measures the dogmatic tendencies of the teacher.

6. The Student Evaluation of Teaching, Forms I[7] and II[8] - student rating forms, each measuring five dimensions of teaching.

7. Teacher Evaluation by Peer/Supervisor, Forms I and II[9] - Peer/supervisor rating forms that assess 17 components of teaching performance.

8. The Teacher Preparation Evaluation Inventory - a 56-item self-report questionnaire for subjects concerning their perceptions of their teacher education program.

9. The Teacher Concerns Checklist, Form B[10] - a 56-item self-report questionnaire for subjects relative to their concerns about teaching.

In the evaluation program at Western Kentucky University, a stratified random sample of elementary and secondary student teachers is selected each spring as subjects for data collection. This data collection is called Phase 1 and the beginning of a cycle. Data are collected again during the first, third, and fifth years of teaching which correspond to Phase 2, Phase 3, and Phase 4 of a cycle. Each year a new cycle is started. Table 1 illustrates the cycle and phase relationship for years 1972 through 1978.

TABLE 1

Cycle and Phase Arrangement for TPEP

| | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| Cycle I | Phase 1 | Phase 2 | | Phase 3 | | Phase 4 | |
| Cycle II | | Phase 1 | Phase 2 | | Phase 3 | | Phase 4 |
| Cycle III | | | Phase 1 | Phase 2 | | Phase 3 | |
| Cycle IV | | | | Phase 1 | Phase 2 | | Phase 3 |
| Cycle V | | | | | Phase 1 | Phase 2 | |
| Cycle VI | | | | | | Phase 1 | Phase 2 |

In Phase 1 of Cycle I through Cycle V, 20 elementary student teachers and 20 secondary student teachers were selected each year as subjects. In Phase 1 of Cycle VI the sample size was increased to 39 elementary teachers and 32 secondary teachers to offset the loss of subjects through attrition experienced in earlier cycles. To date, data have been collected on 271 Phase 1 subjects (6 cycles),

105 Phase 2 subjects (5 cycles), 46 Phase 3 subjects (3 cycles), and 19 Phase 4 subjects (1 cycle).

In each phase, two classroom observation visits are scheduled by observers trained in Interaction Analysis and in the Classroom Observation Record. Paper and pencil instruments used to collect demographic data, peer and supervisor data, and teacher self-report data were distributed to the appropriate persons at the time of the first classroom visit and picked up at the second visit of each phase. Classroom observation and pupil data are obtained during the second visit of each phase.

The data collected by research personnel are translated onto a computer format and stored on disks.

## The Treatment and Analysis of Attrition Data

All subjects selected in Phase 1 who did not enter teaching in Phase 2 or who dropped out of teaching between Phase 2 and Phase 3 became part of the attrition group who were compared to the teaching group who remained in teaching. Persons who moved out of state or who left teaching because of pregnancy were not included in the study. Attrition Group A included those persons who did not enter teaching in Phase 2. This group was compared to the group of participants who were teaching in Phase 2 with respect to Phase 1 variables obtained from data collected during student teaching. Attrition Group B included those persons who dropped out of teaching between years one and three (between Phase 2 and Pahse 3). This group was compared to the group who remained in teaching during Phase 3 both with respect to first-year teaching data (Phase 2 data) and student teaching data (Phase 1 data). Table 2 on the following page summarizes the comparison groups and the comparison made between groups.

TABLE 2

Comparison Groups and Variables Analyzed

| Comparison Groups | Variables Analyzed |
|---|---|
| Teaching Group A - teaching during Phase 2<br><br>Attrition Group A - did not enter teaching in Phase 2 | Phase 1 variables - student teaching data |
| Teaching Group B - teaching during Phase 3<br><br>Attrition group B - dropped out of teaching between Phase 2 and Phase 3 | Phase 1 variables - student teaching data<br><br>Phase 2 variables - first year teaching data |

For each of the comparison groups, data files from the Teacher Preparation Evaluation Program were interrogated and variables were analyzed utilizing a t-test for independent groups and a chi-square test. Only variables where the differences between groups were significant at the .05 level were considered as representing a difference in the character of the two groups.

## Analysis of the Data

To assist in the orderly presentation of the data obtained from TPEP, the data were organized in three sections. The first section contains data relative to the numbers and percent of subjects in the various phases and cycles and reasons given for not entering or continuing in the teaching profession. In section two, the data presented show the differences between subjects who entered the teaching

after graduation and those who did not in terms of the variables measured during student teaching, Phase 1. In section three, the data show comparisons between subjects who were teaching in Phase 2 but not in Phase 3 and subjects who were teaching in Phase 2 and Phase 3. Comparisons are made based on measurements from Phase 1 and Phase 2.

The Attrition of TPEP Subjects

During the six-year period from 1972 through 1977, 136 elementary student teachers and 127 secondary student teachers were subjects for the TPEP project at Western Kentucky University. From these samples of student teachers, there were 93 elementary education graduates and 54 secondary education graduates who obtained teaching positions for the school year immediately following graduation. These subjects who entered the teaching profession after their graduation remain in the follow-up study for five years or until they move out of the state of Kentucky or quit teaching. Table 3 shows the numbers of student teachers selected for each of the six samples and the numbers of subjects remaining in the study from Phase 1 through Phase 4.

The data in Table 3 indicate that for secondary education students the greatest loss of subjects occurs between Phase 1 and Phase 2, between student teaching and actually obtaining a teaching position following graduation. One hundred twenty-seven secondary education student teachers were selected during Phase 1 sampling but only 54 subjects (43 percent) were teaching in Kentucky during the school year following graduation. This loss of subjects between Phase 1 and Phase 2 appears consistent in Cycle I through Chcle VI, samples selected during the spring semesters for the years 1972 through 1977. The attrition of subjects between Phase 2 through Phase 4 is considerably less.

The attrition pattern of subjects from the samples of elementary education student teachers appears to differ from the pattern for secondary education majors.

TABLE 3

Number of Teachers Who Remained in the Study Sample Over a Five-Year Period

| Cycle | Level | Phase 1 Student Teaching | Phase 2 1st Year Teaching | Phase 3 3rd Year Teaching | Phase 4 5th Year Teaching |
|---|---|---|---|---|---|
| Cycle I (1972) | Elementary | 20 | 15 | 10 | 6 |
| | Secondary | 18 | 7 | 3 | 3 |
| Cycle II (1973) | Elementary | 20 | 13 | 7 | 5 |
| | Secondary | 20 | 8 | 5 | 4 |
| Cycle III (1974) | Elementary | 20 | 16 | 13 | |
| | Secondary | 17 | 9 | 8 | |
| Cycle IV (1975) | Elementary | 17 | 14 | 11 | No data for Cycle III Cycle IV Cycle V and Cycle VI |
| | Secondary | 20 | 6 | 4 | |
| Cycle V (1976) | Elementary | 20 | 10 | No data for Cycle V and Cycle VI | |
| | Secondary | 20 | 7 | | |
| Cycle VI (1977) | Elementary | 39 | 25 | | |
| | Secondary | 32 | 17 | | |
| Total | Elementary | 136 | 93 | 41 | 11 |
| | Secondary | 127 | 54 | 20 | 7 |

Of the 136 elementary student teachers selected in Phase 1, 93 (70 percent) were teaching in Kentucky during the school year following their graduation. This initial loss of subjects in the elementary sample is less than for the secondary sample; however, the attrition of elementary subjects appears to be more distributed over the four phases than for the secondary sample.

Table 4 below shows the percent of subjects selected during their student teaching experience that enter the teaching profession and continue to teach. Of the 263 students selected in Phase 1 of Cycle I through Cycle VI, 145 subjects or 55 percent begin teaching the school year following graduation. Of the 78 subjects in Cycle I and Cycle II, 18 subjects or 23 percent were still teaching in Phase 4 which was the fifth year after graduation. The percent of elementary education majors going directly into teaching from college (70 percent) is considerably higher than for secondary education majors (43 percent). Although this 27 percent difference in attrition rate is pronounced in Phase 2, it appears that after five years the percentages of elementary education majors and secondary education majors remaining in teaching are not so different--28 percent compared to 18 percent respectively.

TABLE 4

Percent of the Original Study Sample Who Enter and Remain in Teaching in Kentucky

| Time | Percent Teaching 1 Year after student teaching | Percent Teaching 3 Years after student teaching | Percent Teaching 5 Years after student teaching |
|---|---|---|---|
| | N = 145/263 | N = 61/152 | N = 18/78 |
| Level | Data collected on samples from six cycles | Date collected on samples from four cycles | Data collected on samples from two cycles |
| Elementary | 70 | 53 | 28 |
| Secondary | 43 | 27 | 18 |
| Combined Levels | 55 | 50 | 23 |

*A participant who does not obtain a teaching position or moves out of state is dropped from the study.

TABLE 5

Number of Secondary Education Subjects Obtaining and Not Obtaining Teaching Positions According to Their Teaching Major in a Sample of 93 Secondary Student Teachers

| Major | Obtained a Teaching Position | Did Not Obtain a Teaching Position |
|---|---|---|
| Agriculture | 2 | 5 |
| Biology | 3 | 1 |
| Business | 10 | 4 |
| English | 3 | 4 |
| Health | 1 | 0 |
| Home Economics | 0 | 4 |
| Humanities | 0 | 2 |
| Mass Communications | 0 | 2 |
| Math | 4 | 4 |
| Physical Education | 2 | 6 |
| Physical Science | 2 | 0 |
| Psychology | 2 | 5 |
| Social Science | 3 | 19 |
| Speech | 0 | 3 |
| Secondary Education | 2 | 0 |
| TOTAL | 34 | 59 |

Table 5 shows the number of secondary student teachers who obtained teaching positions and who did not by subject matter majors from a sample of 93. It is clear from the data that the ability of secondary student teachers to obtain a teaching position is related to one's teaching major. Ten of the 14 subjects with business

majors obtained teaching positions following their graduation whereas only 3 of the 22 subjects with a major in social sciences and only 2 of the 8 physical education majors were teaching the school year following their graduation. This finding is consistent with the job market in Kentucky.

Table 6 below shows the reasons given by 43 elementary education graduates and 73 secondary education education graduates for not obtaining a teaching position after graduation and the percent of participants listing each reason. The major reason by both the elementary and secondary education graduates was they were unable to find a teaching position with 36 percent of the elementary group and 49 percent of the secondary group giving this reason.

TABLE 6

Percent of Participants Not Entering Teaching Following Graduation by Reasons Reported

| Reason for Not Entering Teaching | Percent of Responses | | |
|---|---|---|---|
| | Elementary (N = 43) | Secondary (N = 73) | Total (N = 116) |
| Could not find a job | 36 | 49 | 45 |
| Graduate school | 7 | 11 | 9 |
| Marriage and pregnancy | 5 | 5 | 5 |
| Moved out of state | 11 | 4 | 7 |
| Did not want to teach | 7 | 8 | 8 |
| Other employment | 4 | 5 | 5 |
| Other reasons | 7 | 8 | 7 |
| Did not report | 23 | 8 | 15 |

Another significant reason for not teaching was entering graduate school. Seven percent of the elementary group and 11 percent of the secondary group cited entering graduate school as their reason for not teaching. Also of note is the 8 percent that indicated that they did not want to teach--7 percent of the elementary group and 8 percent of the secondary group. The 15 percent who failed to report a reason were mostly women elementary subjects who had changed addresses and were difficult to contact for data.

Some information was gathered concerning reasons given for dropping out of teaching after having taught at least one year. Table 7 shows the reasons given by a sample of 18 teachers for leaving teaching between year 1 and year 3. Although the numbers reported in Table 7 are small, one might note that there are only slight differences in the frequencies between the reasons given except for "pregnancy." This reason appeared more frequently than others.

TABLE 7

Number of Participants Dropping Out of Teaching Between Years One and Three by Reasons Given

| Reason | Number Dropping Out | | |
|---|---|---|---|
| | Elementary | Secondary | Total |
| Could not find a teaching position | 2 | 0 | 2 |
| Salary too low | 2 | 0 | 2 |
| Graduate school | 0 | 2 | 2 |
| Pregnancy | 5 | 3 | 8 |
| Moved out of state | 2 | 0 | 2 |
| Other employment | 1 | 1 | 2 |
| Did not report | 5 | 4 | 9 |
| Total | 17 | 10 | 27 |

Differences Between Student Teachers Who Enter Teaching and Those Who Did Not

Of the 136 elementary education student teachers selected for the study in Cycle I through VI, 93 took teaching positions following their graduation and 43 did not. Of the 127 secondary education student teachers selected for the study, 54 went into teaching following their graduation and 73 did not. Since all 263 of these students had measurements on several different variables from instruments administered during their student teaching experiences, it was possible to compare the attrition group, elementary or secondary, with the appropriate teaching group. This section reports the more significant differences between the attrition and teaching groups citing only differences where the level of significance was .05 or less.

These data were able to support only one significant difference between the elementary education student teachers who obtained positions and those who did not. In using the chi-square test, a significant difference ($p < .02$) was found in relationship to the occupation of the student's spouse. In this comparison, all of the students who reported that their spouses were in professional occupations obtained teaching positions following their graduation. The other occupational classifications were nearly equal in terms of the numbers of students who went into teaching and the numbers who did not go into teaching.

In comparing the secondary education attrition and teaching groups, eight items on the Teacher Preparation Evaluation Inventory and one variable from the interaction analysis were found to be statistically significant. Table 8 contains a summary of the results of the data analysis. The table contains a brief description of the variable that was found to be significantly different between the groups and the nature of this difference.

TABLE 8

Differences Between Secondary Student Teachers Who Obtained Teaching Positions and Those Who Did Not with Respect to Variables from Student Teaching Data

| Variable | Instrument | Difference | Level of Significance |
|---|---|---|---|
| Perceived problem of developing rapport with students | TPEI* | Teaching group saw problem less severe | <.01 |
| Sufficiency of instruction in teaching students with different ability levels | TPEI | Teaching group related the sufficiency of instruction as greater | <.05 |
| Sufficiency of instruction in developing relationships with faculty | TPEI | Teaching group rated the sufficiency of instruction as greater | <.05 |
| Perceived problems in the use of alternative teaching techniques | TPEI | Teaching group saw problem less severe | <.05 |
| Quality of instruction in the use of alternative teaching techniques | TPEI | Teaching group rated the quality of instruction higher | <.01 |
| Quality of instruction in tests and measurement | TPEI | Attrition group rated the quality of instruction higher | <.05 |
| Ratio of student initiated talk to total classroom talk | Inter-action Analysis | Teaching group .07 mean<br>Attrition group .12 mean | <.05 |
| Size of community in which participant was reared | TPEI | Participants reared in suburban areas more likely to obtain a teaching position | <.01 |
| Membership in a professional organization during student teaching | TPEI | Over 50% of teaching group were members.<br>Less than 25% of attrition group were members | <.01 |

*Teacher Preparation Evaluation Inventory

Date in Table 8 suggest that members of the teaching group perceived fewer problems in establishing rapport with students and in being able to use alternative teaching methods during their student teaching experiences than the attrition group. The teaching group appeared to consider the quality of instruction or the sufficiency of instruction that they received in their teacher preparation program in several areas as greater than did the attrition group. In addition, the teaching group indicated that there had been more sufficient instruction during their training spent in the areas of teaching students of different levels and developing relationships with the faculty than did the attrition group. The attrition group, however, rated the quality of instruction in tests and measurement as higher and had a higher ratio of student initiated talk to total classroom talk.

Two other relationships found to be significant involved the community size in which the student was reared and student membership in professional organizations. Students reared in suburban areas were more likely to commence teaching following graduation than were students reared in other environments. The other relationship indicated that a larger portion of the teaching group had been members of a professional organization during their student teaching experiences. Approximately 56 percent of the teaching group had been members of a professional organization compared to only 24 percent of the attrition group.

Differences Between Persons Who Left the Teaching Profession and Those Who Stayed in Teaching Through the Third Year

Of the 152 subjects selected in Phase 1 for Cycle I through Cycle IV, 88 obtained teaching positions for the school year following their graduation. There were 58 elementary teachers and 30 secondary teachers. In the follow-up study of those teachers conducted in Phase 3, 41 of the elementary teachers and 20 of the secondary teachers were employed in a teaching position; 17 elementary teachers and 10 secondary teachers had dropped out of teaching between Phase 2 and Phase 3.

TPEP data on 270 variables from Phase 1 and Phase 2 were available for the 88 subjects, permitting a comparison to be made between the elementary teachers who continued teaching and those who dropped out of teaching on variables measured during student teaching and during the first year of teaching. Similar comparisons were made between the secondary teachers who continued teaching and those who dropped out of teaching.

Table 9 contains a summary of the differences between the two elementary teachers groups--the attrition group and the teaching group--that were statistically significant for data collected during student teaching.

From Table 9 there is evidence that trained observers judged the teaching group to be more stimulating, more original, and more alert as student teachers than the attrition group that dropped out of teaching between years 1 and 3. Also, the teaching group rated the quality of instruction in their teacher preparation program in the areas of developing rapport with students and teacher self-evaluation as better than did the group that dropped out of teaching.

The teaching group was more favorable in their attitudes toward their subject matter preparation, the sufficiency of instruction concerning rapport with students, and the usefulness of instruction in audio-visual methods. In addition, they were more likely to feel that faculty members in their teacher preparation program made themselves more available to the students.

Another characteristics in which the two groups differed significantly was grade point average in professional education courses. The grade point average of the teaching group was 3.46 as compared to 3.12 for the attrition group.

TABLE 9

Difference Between Elementary Teachers Who Were Teaching in Year Three and Participants Who Dropped Out of Teaching Between Years One and Three with Respect to Variables from Student Teaching Data

| Variable | Instrument | Difference | Level of Significance |
|---|---|---|---|
| Professional education grade point average | | Teaching group 3.46 Attrition group 3.12 | <.05 |
| Teacher appears stimulating as opposed to dull | COR* | Teaching group judged more stimulating | <.05 |
| Teacher appears original as as opposed to stereotyped | COR | Teaching group judged more original | <.05 |
| Teacher appears alert as opposed to apathetic | COR | Teaching group judged more alert | <.05 |
| Teachers rating of their subject matter preparation | TPEI** | Teaching group rated their preparation as more adequate | <.05 |
| Quality of instruction in developing rapport with students | TPEI | Teaching group rated the quality of instruction higher | <.05 |
| Sufficiency of instruction in developing rapport with students | TPEI | Teaching group rated the sufficiency of instruction as greater | <.05 |
| Quality of instruction in self evaluation of teaching | TPEI | Teaching group rated the quality of instruction higher | <.05 |
| Usefulness of class in audio-visual teaching | TPEI | Teaching group rated the AV class as more useful | <.05 |
| Perceived availability of faculty in the preservice program | TPEI | Teaching group rated the faculty as more available | <.01 |

*Classroom Observation Record
**Teacher Preparation Evaluation Inventory

Table 10 presents the differences between the elementary teaching group who remained in teaching through year 3 and the group of elementary teachers that

dropped out of teaching between years 1 and 3 with respect to variables measured during their first year of teaching.

TABLE 10

Differences Between Elementary Teachers Who Were Teaching in Year Three and Participants Who Dropped Out of Teaching Between Years One and Three with Respect to Variables from Year-One Data

| Variable | Instrument | Differences | Level of Significance |
|---|---|---|---|
| Teachers average rating by supervisors | TEP/S* | Teaching group had higher ratings | <.05 |
| Subject matter competence rated by peers | TEP/S | Teaching group had higher ratings | <.05 |
| Teaching competence rated by peers | TEP/S | Teaching group had higher ratings | <.05 |
| Quality of instruction in relevance of materials to students | TPEI** | Teaching group had higher ratings | <.05 |
| Quality of instruction in motivating students | TPEI | Teaching group rated instruction higher | <.05 |
| Sufficiency of instruction in developing faculty relations | TPEI | Teaching group rated instruction as substantial<br>Attrition group rated instruction as excessive | <.05 |
| Sufficiency of instruction in developing relationships with administrators | TPEI | Teaching group rated instruction as substantial<br>Attrition group rated instruction as excessive | <.05 |
| Ratio of indirect teacher talk to direct teacher talk | Interaction Analysis | Teaching group - .78 mean<br>Attrition group- .46 mean | <.05 |
| Ratio of lecture to total classroom time | Interaction Analysis | Teaching group - .16 mean<br>Attrition group - .09 mean | <.05 |
| Ratio of teacher talk to total classroom time | Interaction Analysis | Teaching group - .53 mean<br>Attrition group - .44 | <.05 |

*Teacher Evaluation by Peer/Supervisor
**Teacher Preparation Evaluation Inventory

One difference between the groups was the ratings from supervisors. The teaching group received significantly higher ratings from their supervisors than did the attrition group. They also received higher ratings from their peers in terms of subject matter competency.

The teaching group rated the quality of instruction they received in the areas of providing student relevant materials and in student motivation as better than did the attrition group. With respect to the variable sufficiency of instruction in developing relationships with faculty and with administrators, the data are interesting. The attrition group rated their instruction in these areas as excessive whereas the teaching group rated their instruction in these areas as substantial.

According to the interaction analysis data, the teaching group had higher ratios of indirect teacher talk to direct teacher talk, lecture time to total classroom time, and teacher talk time to total classroom time than did the group that dropped out of teaching.

In analyzing the data for the group of secondary education majors that was teaching in Phase 3 (through year 3) and the group of secondary education majors that dropped out of teaching after Phase 2 (between year 1 and year 3), only one variable in the student teaching data and only two variables from year one data yielded significant differences. The teaching group rated the quality of instruction in human growth and development as better than did the attrition group. This comparison was made from data collected when the subjects were doing their student teaching.

From data collected during the subjects first year in teaching, significant differences appear in the ratings of the teacher education program in helping to solve problems and the ratio of student talk to total talk. The teaching group rated the teacher education program as being more helpful in aiding them in solving

classroom problems. The mean ratio of student talk to total talk was .19 for the teaching group and .35 for the attrition group.

## Concluding Generalizations

There is a substantial amount of support for the need to conduct follow-up studies of teacher education graduates. Specifically, there is the need for follow-up investigations on graduates to obtain data related to career decisions. Such studies, however, are few in number due to both the high cost and inherent problems associated with a comprehensive evaluation program. Dealing with large numbers of variables, establishing research-type controls, the logistics of following subjects and gathering data, and maintaining reasonable sample sizes are only a few of the problems that make a follow-up evaluation program difficult if not impossible.

It should be remembered that the TPEP project was designed to systematically collect pertinent information on teacher education graduates at Western Kentucky University. The data were to be used primarily to assist the faculty and administration in making decisions about the continued development and management of the teacher education program. While the variables to be studied and the instrumentation were selected in relation to an evaluation program design, the problems caused by (1) extraneous variables, (2) small sample sizes, (3) disproportionate numbers in some comparison groups, (4) inferring cause and effect relationships from data gathered in a non-experimental design, and (5) the use of multiple significance testing all inflate the probability of committing type I errors.

Following are some conclusions and recommendations presented by the investigators that are seen as logical extensions of the TPEP data. This was the first time the data were interrogated to compare subjects who entered and

remained in teaching with those who were dropped from the program because they did not enter or remain in teaching. These conclusions and recommendations are presented as suggestions to stimulate further discission and investigation, not as the final word. Six major generalizations are presented below followed by suggestions for further consideration and study.

1. The Teacher Preparation Evaluation Program Model at Western Kentucky University can provide useful information in comparing teacher education graduates who enter and remain in teaching with attrition groups that fail to obtain teaching positions or who leave the teaching profession. The data presented in this study provide information relating to career decisions that could be useful both to teacher educators and students in teacher education programs if followed up and refined.

Due to the higher attrition rate of the study sample, larger study samples need to be selected during Phase 1 of each cycle. Also more follow-up data from the attrition group are needed after they drop out of the program.

2. Only a fraction, between one-fifth and one-third, of seniors who graduate from the teacher education program at Western Kentucky University are likely to obtain a teaching position in Kentucky the following year and remain teaching in the State for five years.

The pattern of attrition is different for elementary education majors than for majors prepared to teacher secondary education. Secondary education subjects in the study experienced a large loss (57 percent) between student teaching and year one with smaller percentage losses over a five-year period. The attrition of elementary education subjects was spread out more evenly over the five-year period. A partial reason for the attrition pattern of elementary education subjects may be sex-related since more than 97 percent of the elementary education sample were women.

This high attrition rate raises the question should colleges of teacher education train larger numbers of teachers than required by the job market since natural attrition will always occur or should high standards for entrance to and/or exit from teacher education be imposed to insure that those who are trained will likely enter and remain in teaching. A second more philosophical issue is related to the value of the professional education program for careers other than teaching and who should make that decision.

3. The number one reason for not entering the teaching profession immediately after graduation is the inability to obtain a teaching position. This reason was given by 36 percent of the elementary education subjects and 49 percent of the secondary education sybjects who did not obtain a teaching position in Phase 2 of the study. For secondary education subjects the data show that the inability to find a teaching position is highly related to the subject's undergraduate major and the job market in Kentucky. There is also some evidence to indicate that students reared in suburban communities are more likely to find a teaching position.

For elementary education subjects who were 97 percent women, the spouse's occupation of student teachers who were married was highly related to the ability to find a teaching position.

These findings suggest that institutions that prepare teachers should examine their counseling and advisement programs to insure that students entering professional education are aware of the job market and understand the probability of obtaining teaching positions in different geographical locations as well as in various subject matter specialities.

4. The reasons for not remaining in teaching after entering and teaching for one year are varied with the exception that pregnancy was the most frequent reason given by women subjects. From the data no one reason other than pregnancy for women subjects seemed to be significant for those who left teaching after one year.

This fact points up the need to further investigate what happens to the significant number of women who leave teaching because of pregnancy and time off to raise a family. How many reenter teaching? How long do they normally remain out of teaching? How large is the potential pool of teachers who have dropped out to raise a family? Are special retraining programs needed for mothers who reenter teaching after several years away from the classroom? All of these questions need further investigation by following up subjects who leave teaching because of pregnancy or desire to raise a family. Also the existing employment practices of schools with regard to women who become pregnant needs to be further investigated to better understand the attrition pattern due to pregnancies.

5. <u>According to the data analyzed in this study, few differences were found between elementary education majors who obtained teaching positions and those who did not; however, a number of significant differences were found between those who left teaching after year one and those who remained in teaching through the third year</u>. There is some indication that for elementary education subjects, who were almost all women, marriage plans and moving to where the husband was located were factors related to whether or not they obtained teaching positions in year one. Therefore, few differences with respect to TPEP variables were found for elementary student teachers who obtained teaching positions in year one and those who did not. However, for elementary subjects who obtained a teaching position, there were significant differences between those who left after year one and those who remained through the third year of teaching. As compared to the attrition group, the teachers who remained in teaching differed in the following ways:

a. Had a higher professional education grade point average.

b. Were more positive toward their professional education program during student teaching.

c. Were judged by trained observers to be more stimulating, original, and more alert.

d. Remained more positive about their professional education experience during their first year of teaching.

e. Received higher ratings from their peers and administrators during their first year of teaching.

f. Exhibited more indirect behavior in the classroom during their first year of teaching according to the interaction analysis observation system.

It is interesting to note that the attrition group who received the lower rating from their administrators and peers also judged the instruction they received in developing relationships with faculty and administrators as "excessive."

The data for elementary education subjects suggest that the attitudes and perceptions of students as well as grade point average in professional education are possible predictors of persons most likely to remain in teaching. Also the data suggest that peer and administrator ratings may be useful in identifying first-year teachers who have problems that need attention.

6. <u>According to the data analyzed in this study, a number of significant differences were found between secondary student teachers who obtained teaching positions and those who did not; however, few differences were found between secondary subjects who left teaching after the first year and those who remained in teaching through year three</u>. One possible reason for not finding differences between the teaching and attrition group between years one and three was the small number of subjects remaining in the study sample past year one.

As compared to the secondary student teachers who did <u>not</u> obtain teaching positions, persons obtaining a teaching position differed in the following ways:

a. Perceived their teacher education program as more positive and helpful.

b. Perceived teaching problems as less severe.

c. Showed more evidence of a commitment to professional education during student teaching.

Secondary subjects who obtained a teaching position rated a number of areas of their professional training higher and were more than twice as likely to join a professional organization during student teaching.

These data suggest that a positive attitude toward professional education and a commitment to teaching are important factors to look for in students if one is interested in identifying persons who are the most likely to obtain a teaching position in secondary education.

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